

Sodium in Drinking Water Fact Sheet

Is sodium found in drinking water?

Yes, sodium is a naturally occurring element found in low levels of water and soil. Drinking water contributes a small percentage (less than 10%) of a person's overall daily sodium intake, which ranges from:

- 115 to 750 milligrams per day (mg/d) for infants,
- 325 to 2,700mg/d for children and
- 1,100 to 3,300 mg/d for adults.

The MA Department of Environmental Protection (MDEP) currently requires all water suppliers to inform the Massachusetts Department of Public Health/Bureau of Environmental Health (MDPH/BEH), MDEP and local Boards of Health the concentrations of sodium in drinking water. Notification is required so that individuals who are on a sodium restricted diet or wish to monitor their sodium intake for other reasons will have this information.

What is sodium's purpose?

Sodium is an essential mineral necessary for the normal functioning of the body and maintenance of body fluids. Nerve function and muscle contraction are also affected by sodium intake.

Where do we get sodium?

Sodium cannot be manufactured or stored in the body and must be consumed from drinking water and some foods; such as animal foods, low-fat dairy products, some canned foods, pickles, and olives.

What is the current guideline for sodium in drinking water and who should be concerned about this guideline?

The MDEP guideline of 20 milligrams of sodium per liter of water represents a level of sodium in water that physicians and sodium-sensitive individuals should be aware of in cases where sodium exposures are carefully controlled. People who have difficulty regulating fluid volume, as a result of several diseases such as hypertension and kidney failure, are particularly affected by elevated levels of sodium.

Hypertension is the medical name for high blood pressure and is a common, chronic medical problem in the United States. It is responsible for a major portion of cardiovascular disease and stroke deaths.

Kidney failure happens when an excess of sodium in the body causes fluid concentrations to change and the kidney fails to remove fluid. The result is a kidney shut-down and the build-up of fluid in the body which can lead to edema and hypertension.

Edema is the collection of water in and around the body tissues. Mild cases of edema affect women prior to the start of their menstrual periods, and many pregnant women suffer with this condition.

How is sodium measured in my body?

Your doctor or health professional measures sodium by taking your blood or checking a urine sample (or both). If your sodium levels are elevated, your physician may prescribe a diet low in sodium.

Reducing sodium intake not only prevents high blood pressure, but may also prevent heart disease, according to clinical trial data from the National Heart, Lung, and Blood Institute of the National Institutes of Health.

Where do I go for more information?

If you have any questions about sodium and your health, call your physician or health professional.

If you have any questions regarding sodium in drinking water, call the Massachusetts Department of Environmental Protection's Drinking Water Program at (617) 292-5770.

References:

- Clayman, Charles B., (Editor), *The Encyclopedia of Medicine, Family Medical Guide*, The American Medical Association, Random House, New York, New York 1994.
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- Mabee, Marcia S.MPH, PhD,(Editor); *The CSTE Washington Report*; Reston, VA; Vol. 5, No. 17, September 13, 2001.
- The Surgeon General's Report on Nutrition and Health, U.S. Department of Health & Human Services, PHS No. 88-50210, 1988.
- "Sodium in Public Drinking Water", Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program, 1997 - Updated October 2006.

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